R E M A R K S

Claims 1-6 are now in this application, and are presented for the Examiner's consideration.

The Abstract has been amended in order to correct various errors and to eliminate legal terms. A marked-up copy of the amended portions of the Abstract is provided at the end of this Preliminary Amendment. A clean copy of the amended Abstract is also provided at the end of this Preliminary Amendment on a separate sheet.

The specification has been amended in order to correct various errors. A marked-up copy of the amended portions of the specification is provided at the end of this Preliminary Amendment.

The claims have also been amended in order to provide proper antecedent basis, and to positively recite the steps. A marked-up copy of the amended claims is provided at the end of this Preliminary Amendment.

In addition, Figs. 1(a), 1(b), 6 and 7 have been amended, as indicated in red on the attached copies herewith.

Specifically, Fig. 1(a) has been separated into Figs. 1(a)(1) and 1(a)(2), Fig. 1(b) has been separated into Figs. 1(b)(1) and 1(b)(2), numeral 9 has been added to refer to the positive electrode in Fig. 6, and Fig. 7 has been separated into Figs. 7(a) and 7(b).

The Examiner is requested to approve these drawing changes.

A separate letter to the Official Draftsman is also enclosed.

Please charge any additional fees incurred by this Preliminary Amendment, or credit any overpayment, to Deposit Account No. 07-1524.

It is hoped that this Preliminary Amendment will facilitate an examination of the application on its merits.

Respectfully submitted,

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Enclosures: MARKED-UP AMENDMENTS TO ABSTRACT
CLEAN COPY OF AMENDED ABSTRACT ON A SEPARATE SHEET
MARKED-UP COPY OF SPECIFICATION AMENDMENTS
MARKED-UP COPY OF AMENDED CLAIMS
LETTER TO OFFICIAL DRAFTSMAN and marked up copies of Figs. 1(a), 1(b), 6 and 7

MARKED-UP AMENDMENTS TO ABSTRACT

Page 13, cancel the paragraphs on the entire page, and in place thereof, insert the following new paragraphs:

ABSTRACT OF THE DISCLOSURE

A method of manufacturing a ferrule [comprising] includes the steps of electroforming on a [wire such as a] metallic wire used as a mother mold to produce an elongated cylindrical rod, by providing grooves [7] on the circumferential surface of the rod, breaking the groove portion and drawing the wire, and machining the rod with respect to at least length and size (diameter), such that the method omits[. An object of the present invention is to provide a method of manufacturing a ferrule that can improve productivity and quality by omitting] the step of sealing the wire with an electric insulator [or the like whereby] and an elongated electroformed rod can be manufactured and variation in sizes of diameter and off-center failure are decreased.

MARKED-UP COPY OF SPECIFICATION AMENDMENTS

Page 2, cancel the paragraph at lines 13-24, and in place thereof, insert the following new paragraph:

More specifically, in the drawing method comprising the steps of using a wire such as a metallic wire or the like as a mother mold, and drawing the wire after electroforming on the mother mold wire, since the tensile strength of the wire is insufficient and the drawing resistance is high, the drawing is [not] performed only to a length of about 30 to 100 mm of the length. To make the electroformed portion 5 into a rod as long as possible is very important for an improvement in productivity of the electroforming. As a result, the method using electric insulators was reluctantly adopted. However, the following problems arose.

Page 3, line 21 - Page 4, line 1, cancel the paragraph, and in place thereof, insert the following new paragraph:

Taking the above-mentioned problems into consideration, in a method of [manufactiring] <u>manufacturing</u> a ferrule wherein electroforming is carried out using a wire such as a metallic wire or the like as a mother mold, and after drawing the wire, machining the obtained electroformed article, the object of the present invention is to

provide a method by which an electroformed article having the longest possible length and a small variation in the size of diameters without the step of sealing an electric insulator.

Page 4, cancel the paragraph at lines 16-18, and in place thereof, insert the following new paragraphs:

Fig. 1(a)(1) is [and Fig. 1(b) are] a cross-sectional view [and a side view] of a part for an optical fiber connector according to a conventional method;

Fig. 1(a)(2) is a side elevational view of the optical fiber connector of Fig. 1(a)(1);

Fig. 2(a)(1) is a cross-sectional view of a part for an optical fiber connector according to another conventional method;

Fig. 2(a)(2) is a side elevational view of the optical fiber connector of Fig. 2(a)(1);

Page 5, cancel the paragraph at lines 6-8, and in place thereof, insert the following new paragraphs:

Fig. 7(a) is a side view [and a plan view] showing one example of a supporting jig according to the present invention;

Fig. 7(b) is a plan view of the supporting jig of Fig. 7(a)(1); and

Page 5, cancel the paragraph at lines 15-19, and in place thereof, insert the following new paragraph:

An electroforming device is schematically shown in Fig. 6. In Fig. 6, the electroforming device comprises an electroforming liquid 8, a positive electrode 9, a supporting jig 10, an air stirring nozzle 11, a spring 12, a negative electrode 13, and a wire [13] 3.

Page 7, line 18 - Page 8, line 3, cancel the paragraph, and in place thereof, insert the following new paragraph:

Alternatively, in the case of two- or multi-core type, high accuracy is required as described above. Thus, a wire having a cross-sectional shape other than a circular cross-section may be used as shown in Figs. 8(a) to 8(g). That is, in Fig. 8, the type of (a) is an oval wire, which is a two-core type, the type of (b) is a triangular wire with a round portion in each corner, which is a three-core type, the type of (c) is a square wire with a round portion in each corner, which is a four-core type, the type of (d) is a rectangular wire with a round portion in each corner, which is a five-core type, the type of (e) is a rectangular wire with a round portion in each corner, which is a six-core type, the type of (f) is a hexagonal [rectangular] wire with a round portion in each

corner, which is a seven-core type, and the type of (g) is a rectangular wire with a four-core type. However, in Figs. 8(a) to 8(f), round portions may not be provided in corners. When these wires are used, the same method as in the case of a one-core type can be utilized.

Page 10, line 2 - Page 11, line 1, cancel the paragraph, and in place thereof, insert the following new paragraph:

An example of the present invention will be described below. A SUS 304 wire having a circular cross-section and a diameter of 0.126 mm was prepared, and the wire was set at an electroforming jig with the wire stretched by the elasticity of a spring as shown in Fig. 6. After rinsing the wire, the wire was [electrolyitically] electrolytically degreased and rinsed. After the wire was immersed in an aqueous solution of Nikka Non-tack A and B mixed liquid produced by Nippon Chemical Industry Co. Ltd., at an ordinary room temperature for 10 minutes and mold releasing processing was performed. After that the wire was rinsed well. On the other hand, the following tank was prepared. That is, four anodes of nickel spheres in titanium net contained in a polyester bag were provided in an electroforming liquid principally containing nickel sulfamate and in the

four corners of the tank. The wire was placed substantially at the center of the four anodes. The electroforming liquid was filtered with 1 μm filtration precision at high speed and heated the tank at 50 ± 2°C. Then, they were set as shown in Fig. 6, and the wire was used as a cathode and nickel spheres were used as anodes.

Electroforming was performed one day at a current density of about 4 to 6 A/dm^2 and a nickel electroformed article (rod) having an average diameter of 2.5 mm and a length of about 250 mm resulted. Then, cutting grooves were prepared on the surface of the electroformed article at intervals of about 50 mm with a polishing machine. This groove portion was bent and broken and the wire was easily drawn. Then, the electroformed article was machined or ground to a diameter of 2.00 mm and a length of 8.00 mm with an NC . auto-turning machine, a centerless machine or the like to obtain a finished product. The products manufactured this way were problem free.

MARKED-UP COPY OF AMENDED CLAIMS

Amend claim 1 and add new claims 5 and 6, as follows:

1. (Amended) A method of manufacturing a part for an optical fiber connector, the method comprising the steps of:

electroforming on a [metallic or plastic] wire used as a mother mold with the wire stretched to make the wire into a rod,

forming grooves on the rod at intervals to form groove portions,

breaking the groove portions,

drawing the wire, and

machining the rod to adjust at least [the] a length and diameter of the rod.

Add the following new claims:

5. (New) The method of manufacturing a part for an optical fiber connector according to claim 1, wherein the wire is made from metal.

6. (New) The method of manufacturing a part for an optical fiber connector according to claim 1, wherein the wire is made from plastic.

ABSTRACT OF THE DISCLOSURE

A method of manufacturing a ferrule includes the steps of electroforming on a metallic wire used as a mother mold to produce an elongated cylindrical rod, by providing grooves on the circumferential surface of the rod, breaking the groove portion and drawing the wire, and machining the rod with respect to at least length and size (diameter), such that the method omits the step of sealing the wire with an electric insulator and an elongated electroformed rod can be manufactured and variation in sizes of diameter and off-center failure are decreased.